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# Quality of Life of Nurses in Osijek

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## Abstract

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**Introduction.** The nurse is the one who will be with patients, listen to them, talk to them, provide security, and focus their attention on them. The nurse is unique. The World Health Organisation defines quality of life as the perception of the role of the individual in the context of culture and values in which he lives and in relation to his goals, expectations, standards and concerns.

**Aim.** To examine the quality of life of nurses in the Clinical Hospital Center Osijek and Health center Osijek.

**Study design.** A cross-sectional study.

**Methods.** The study includes the total of 117 nurses, 64 of whom work in the Clinical Hospital Centre in Osijek and 53 are employed in primary health care. The World Health Organization Quality of Life Questionnaire is used in the study. Demographic characteristics are examined in the first part of the questionnaire, and in the second part of the questionnaire participants were asked questions that are related to the quality of their lifestyle.

**Results.** Nurses rated their quality of life as good (45.3 %), also, they are satisfied with their health (59.8 %). Respondents in the age group from 22 to 32 are most satisfied with the domain "Social relations" with the arithmetic mean of 63,06 and *p* value 0.048. All three questions from the domain "Social relationship of nurses" had high arithmetic means which were over 3.60.

**Conclusion.** Quality of life of nurses is at a good level. Younger respondents have a better quality of life. Respondents are most satisfied with their own agility and meaning of their lives, while they are most dissatisfied with their financial situation and opportunities for recreation.

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## Introduction

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"The unique function of the nurse is to assist the individual, sick or well, in the performance of those activities contributing to health or its recovery (or to peaceful death) that he would perform unaided if he had the necessary strength, will or knowledge. And to do this in such a way as to help him gain independence as rapidly as possible" (1).

Each member of the medical team is bound to help the patient to regain independence, but a nurse is a person who spends most time with them while there is no necessary strength, will or knowledge. It is important to point out that a nurse has independence in nursing care and adequately takes care of the patient and that is why there is a chance to observe each patient and perceive their needs, notice potential problems and help the patient to solve them in order to have fast recovery. A nurse is more than a person who assists the patient in the recovery, it is their spokesman. A nurse realizes that the patient has difficulty expressing needs and feelings and, just like a mother, intercedes for them, speaks for them, because a nurse knows what the patient wants. Because they provide the necessary care, a nurse has the opportunity to advise the patient, encourage positive habits and warn about the bad ones. The nurse is the one who will be with them, listen to them, talk to them, provide security, and focus their attention on them. The nurse is unique.

## Definition of quality of life

The World Health Organisation defines quality of life as the perception of the role of the individual in the context of culture and values in which he lives and in relation to his goals, expectations, standards and concerns (2). International Wellbeing Group defines quality of life as a multidimensional construct that comprises the standard of living, health, productivity, the possibility of achieving close contact, security, belonging to a community and a sense of security in the future (3).

## Quality of life indicators

Quality of life includes both an objective and a subjective component. The subjective component of qual-

ity of life includes seven areas: material well-being, emotional well-being, health, productivity, intimacy, safety and community. Objective indicators of quality of life are: income, availability of health services, the availability of different services, numeric indicators of employment and others. It has been shown that subjective well-being has a more important role in determining the overall welfare over objective indicators (4).

Vuletić (4) considers quality of life as well-being affected by objective indicators, a large proportion has a subjective perception and evaluation of physical, material, social and emotional well-being, personal development and purposeful activity. One of the important indicators of quality of life is health. Health is defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (5).

The aim of the research study was to examine the quality of life of nurses in the Clinical Hospital Center Osijek and Health center Osijek.

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## Methods

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This study was cross-sectional. The study was conducted during 2015 and included the total of 117 nurses, of which 64 respondents were from the Clinical Hospital Centre Osijek, and 53 of them worked at the primary health care at the Health center Osijek. The World Health Organization Quality of Life Questionnaire (WHOQOL - BREF (1998.)) was used in the study. It is a short version of the WHOQOL - 100 questionnaire. WHOQOL-BREF consists of 26 questions. In each of these questions, respondents answered on Likert scale (1-5). There are four domains: physical health, psychological health, social relationship and environment (6).

In the Clinical Hospital Center Osijek research was conducted at 5 clinics: Department of Internal Medicine (20.3 %), Department of Psychiatry (4.7 %), Department of Pediatrics (20.3 %), Department of Surgery (29.7 %) and Department of Neurology (25 %). The total number of respondents was 112 females and 5 males.

The average age of respondents was 40.56 years with a standard deviation of 11.73 years. The age range of respondents was from 22 to 64.

The data set was subject to statistical analysis using SPSS (Version 16.0). Categorical data were presented in absolute and relative frequencies. Numerical data were described as mean and standard deviation. The connection of normally distributed numerical variables was evaluated by Pearson correlation coefficient  $r$ . All  $p$  values are two-sided. The level of significance was set at  $\alpha < 0.05$ .

## Ethical Considerations

Ethical permission was sought and gained for the study through the local Ethics Committee and the University Committee, copies of which have been retained for inspection.

## Results

Of the total number of respondents, 29.9 % of the respondents have no children, 19.7 % of the respondents have one child, 44.4 % of the respondents have two children, while 6 % of the respondents have three children. 71 % of the respondents live in urban areas, 29 % in rural areas. Most of the respondents

live in a house or a flat (76.1 %).

Of all respondents, 72 respondents or 61.6 % have secondary education, 41 respondents (35 %) have a Bachelor of Science in Nursing, and 4 respondents (3.4 %) have a Master of Science in Nursing. Most of the respondents work in shifts (39 %), 12/24/12/48 type of work (33 %), other type of work (28 %).

Nurses rated their quality of life as good (45.3 %) and neither poor nor good (31.6 %). Also, they are satisfied with their health (59.8 %) (Table 1).

In the subscale "Physical health", nurses need a little (40.2 %) and a moderate amount of medical treatment to function in their daily life (36.8 %), followed by the lowest arithmetic mean of 1.88. Most of the nurses think that they are very much able to get around (47 %) confirmed by the highest arithmetic mean of 4.15. Also, most of them are satisfied with the ability to perform their activities of daily living (48.7 %) and they are satisfied with their capacity for work (55.6 %) (Table 2).

The highest arithmetic mean for the domain "Mental health of nurses" was 4.15 for the question about the meaning of their life. The lowest arithmetic mean was 2.45 for the question about experiencing negative feelings (Table 3).

Results show that nurses are satisfied with their social relationships. All three questions about social relationship of nurses had high arithmetic means which were over 3.6 (Table 4).

Table 1. Self-assessment of quality of life and health satisfaction

		Number	Percentage (%)	Arithmetic mean	Standard deviation
How would you rate your quality of life?	Very poor	2	1.7		
	Poor	4	3.4		
	Neither poor nor good	37	31.6		
	Good	53	45.3		
	Very good	21	17.9		
	Total	117	100	3.74	0.85
How satisfied are you with your health?	Very dissatisfied	0	0.0		
	Dissatisfied	9	7.7		
	Neither satisfied nor dissatisfied	17	14.5		
	Satisfied	70	59.8		
	Very satisfied	21	17.9		
	Total	117	100	3.88	0.79

Table 2. **Physical health of nurses**

		Number	Percentage (%)	Arithmetic mean	Standard deviation
To what extent do you feel that physical pain prevents you from doing what you need to do?	Not at all	46	39.3	2.03	1.04
	A little	34	29.1		
	A moderate amount	26	22.2		
	Very much	9	7.7		
	An extreme amount	2	1.7		
	Total	117	100		
How much do you need any medical treatment to function in your daily life?	Not at all	2	1.7	1.88	1.00
	A little	47	40.2		
	A moderate amount	43	36.8		
	Very much	14	12		
	An extreme amount	10	8.5		
	Total	117	100		
Do you have enough energy for everyday life?	No answer	3	2.6	3.56	1.00
	Not at all	1	0.9		
	A little	7	6		
	Moderately	39	33.3		
	Mostly	51	43.6		
	Completely	16	13.7		
How well are you able to get around?	Total	117	100	4.15	1.06
	No answer	2	1.7		
	Very poor	1	0.9		
	Poor	5	4.3		
	Neither poor nor good	16	13.7		
	Good	38	32.5		
How satisfied are you with your sleep?	Very good	55	47	3.47	1.22
	Total	117	100		
	No answer	2	1.7		
	Very dissatisfied	7	6		
	Dissatisfied	16	13.7		
	Neither satisfied nor dissatisfied	24	20.5		
How satisfied are you with your ability to perform your daily living activities?	Satisfied	45	38.5	3.75	0.98
	Very satisfied	23	19.7		
	Total	117	100		
	No answer	2	1.7		
	Very dissatisfied	1	0.9		
	Dissatisfied	7	6		
How satisfied are you with your capacity for work?	Neither satisfied nor dissatisfied	27	23.1	4.01	0.89
	Satisfied	57	48.7		
	Very satisfied	23	19.7		
	Total	117	100		
	No answer	2	1.7		
	Very dissatisfied	0	0		
How satisfied are you with your capacity for work?	Dissatisfied	3	2.6	4.01	0.89
	Neither satisfied nor dissatisfied	16	13.7		
	Satisfied	65	55.6		
	Very satisfied	31	26.5		
	Total	117	100		

Table 3. Mental health of nurses

		Number	Percentage (%)	Arithmetic mean	Standard deviation
How much do you enjoy life?	No answer	8	6.8		
	Not at all	2	1.7		
	A little	6	5.1		
	A moderate amount	34	29.1		
	Very much	51	43.6		
	An extreme amount	16	13.7		
	Total	117	100	3.42	1.25
To what extent do you feel your life to be meaningful?	No answer	0	0		
	Not at all	4	3.4		
	A little	17	14.5		
	A moderate amount	53	45.3		
	Very much	43	36.8		
	Total	117	100	4.15	.79
How well are you able to concentrate?	Not at all	1	0.9		
	A little	4	3.4		
	A moderate amount	25	21.4		
	Very much	63	53.8		
	Extremely	24	20.5		
	Total	117	100	3.90	0.79
How satisfied are you with yourself?	No answer	1	0.9		
	Very dissatisfied	1	0.9		
	Dissatisfied	2	1.7		
	Neither satisfied nor dissatisfied	22	18.8		
	Satisfied	66	56.4		
	Very satisfied	25	21.4		
	Total	117	100	3.93	0.83
How often do you have negative feelings such as blue mood, despair, anxiety, depression?	No answer	4	3.4		
	Never	2	1.7		
	Seldom	60	51.3		
	Quite often	39	33.3		
	Very often	12	10.3		
	Always	0	0		
	Total	117	100	2.45	0.84

Table 4. **Social relationship of nurses**

		Number	Percentage (%)	Arithmetic mean	Standard deviation
How satisfied are you with your personal relationships?	No answer	1	0.9		
	Very dissatisfied	0	0		
	Dissatisfied	4	3.4		
	Neither satisfied nor dissatisfied	19	16.2		
	Satisfied	65	55.6		
	Very satisfied	28	23.9		
	Total	117	100	<b>3.97</b>	0.82
How satisfied are you with your sex life?	No answer	5	4.3		
	Very dissatisfied	4	3.4		
	Dissatisfied	5	4.3		
	Neither satisfied nor dissatisfied	33	28.2		
	Satisfied	42	35.9		
	Very satisfied	28	23.9		
	Total	117	100	<b>3.6</b>	1.24
How satisfied are you with the support you get from your friends?	No answer	1	0.9		
	Very dissatisfied	0	0		
	Dissatisfied	6	5.1		
	Neither satisfied nor dissatisfied	21	17.9		
	Satisfied	71	60.7		
	Very satisfied	18	15.4		
	Total	117	100	<b>3.84</b>	0.81

Nurses are most dissatisfied with the amount of money they have and the opportunity for recreation, which has been confirmed with the arithmetic means

of 3.12 and 3.19. They are most satisfied with the possibility of obtaining good medical care (arithmetic mean 4.00) (Table 5).

Table 5. **Environment**

		Number	Percentage (%)	Arithmetic mean	Standard deviation
How safe do you feel in your daily life?	Not at all	3	2.6		
	A little	3	2.6		
	A moderate amount	34	29.1		
	Very much	55	47		
	Extremely	22	18.8		
	Total	117	100	3.77	0.87
How healthy is your physical environment?	Not at all	5	4.3		
	Slightly	5	4.3		
	Moderately	61	52.1		
	Very	40	34.2		
	Extremely	6	5.1		
	Total	117	100	3.32	0.82

Table 5. Environment

		Number	Percentage (%)	Arithmetic mean	Standard deviation
Have you enough money to meet your needs?	No answer	2	1.7		
	Not at all	10	8.5		
	A little	14	12		
	Moderately	45	38.5		
	Mostly	38	32.5		
	Completely	8	6.8		
	Total	117	100	<b>3.12</b>	1.10
How available to you is the information that you need in your day-to-day life?	No answer	2	1.7		
	Not at all	1	0.9		
	A little	3	2.6		
	Moderately	19	16.2		
	Mostly	67	57.3		
	Completely	25	21.4		
	Total	117	100	3.91	0.91
To what extent do you have the opportunity for recreation?	No answer	2	1.7		
	Not at all	10	8.5		
	A little	17	14.5		
	Moderately	40	34.2		
	Mostly	31	26.5		
	Completely	17	14.5		
	Total	117	100	<b>3.19</b>	1.21
How satisfied are you with the conditions of your living place?	No answer	1	0.9		
	Very dissatisfied	1	0.9		
	Dissatisfied	3	2.6		
	Neither satisfied nor dissatisfied	24	20.5		
	Satisfied	51	43.6		
	Very satisfied	37	31.6		
	Total	117	100	<b>4.00</b>	0.92
How easily are you able to get good medical care?	No answer	3	2.6		
	Slightly	1	0.9		
	Moderately	7	6		
	Very	37	31.6		
	Extremely	49	41.9		
	Not at all	20	17.1		
	Total	117	100	3.61	1.03
How satisfied are you with your transport?	No answer	1	0.9		
	Very dissatisfied	1	0.9		
	Dissatisfied	9	7.7		
	Neither satisfied nor dissatisfied	15	12.8		
	Satisfied	54	46.2		
	Very satisfied	37	31.6		
	Total	117	100	3.97	0.99

Results in all subscales had significant positive correlations. The biggest correlation was observed in the variables mental health and social relations ( $p = 0.651$ ) and in the variable psychological health and environment ( $r = 0.752$ ). Respondents which were more satisfied with social relations assessed their mental health better. Respondents with better mental health were more satisfied with their environment (Table 6).

From table we can see that respondents in age group from 22 to 32 had the best answers in the most of the observed domains. They are most satisfied with the domain "Social relations" with the arithmetic mean of 63.06 and  $p$  value 0.048 (Table 7).

## Discussion

Overall, the respondents in this survey gave a pretty good assessment of the overall quality of life. We can conclude that the respondents' self-assessment area quality of life and health satisfaction gave an average grade of 3.74.

One of the studies showed that the most important indicator of the quality of life is satisfaction with personal achievements (7). A survey conducted in Croatia

on 1048 respondents showed that general satisfaction with life is significantly associated with the satisfaction with health (7). Australian psychologist Cummins in a systematic review of the literature in the area of Western Europe, North America and Australia analyzed the distribution of self-assessment of life satisfaction of the adult population and concluded that the average life satisfaction level of  $75\% \pm$  scale maximum. This indicates the high level of satisfaction (8). The WHO study shows that the impact of mental disorders on quality of life equals to or is even greater than the impact of chronic diseases, such as arthritis, diabetes, heart, lung and neurological diseases. Personality is also one of the most important indicators of quality of life (5, 6).

In this study, a significant positive indicator is young age. The assumption was that younger nurses have better social relations. Research has shown that social interaction reduces with age (9). This research showed that people who are between 22 and 32 years old give much higher grades than older people. According to groups, younger people are significantly more satisfied with social relations.

In the domain of "Physical health" respondents were most satisfied with the possibility of moving around and their ability to work. The average grade for the domain mental health is very good. Respondents were most satisfied with the meaning of their own

Table 6. Pearson's correlation coefficient

		Quality of life and satisfaction with health	Physical health	Psychological health	Social relations	Environment
Quality of life and satisfaction with health	r	1	0.474**	0.649**	0.542**	0.654**
	p		0.000	0.000	0.000	0.000
	N	117	113	104	112	113
Physical health	r	0.474**	1	0.568**	0.543**	0.630**
	p	0.000		0.000	0.000	0.000
	N	113	113	102	109	111
Psychological health	r	0.649**	0.568**	1	0.651**	0.752**
	p	0.000	0.000		0.000	0.000
	N	104	102	104	100	102
Social relations	r	0.542**	0.543**	0.651**	1	0.608**
	p	0.000	0.000	0.000		0.000
	N	112	109	100	112	110

\*\*Correlation is significant at the 0.01 level (2-tailed).



Table 7. Testing the significance of differences in the observed domains according to age categories

	Age categories	N	Arithmetic mean of ranks	p value
Quality of life and satisfaction with health	22 - 32	36	62.47	0.361
	33-43	29	51.72	
	44 - 54	28	50.27	
	55 and more	18	58.86	
	Total	111		
Physical health	22 - 32	35	53.19	0.387
	33-43	28	46.66	
	44 - 54	26	58.02	
	55 and more	18	61.19	
	Total	107		
Psychological health	22 - 32	34	57.03	0.072
	33-43	26	48.19	
	44 - 54	23	37.80	
	55 and more	16	55.53	
	Total	99		
Social relations	22 - 32	33	63.06	0.048
	33-43	29	54.24	
	44 - 54	27	41.15	
	55 and more	18	56.28	
	Total	107		
Environment	22 - 32	35	54.03	0.420
	33-43	28	50.27	
	44 - 54	26	50.65	
	55 and more	18	64.58	
	Total	107		

\*Chi-square test

life. Respondents were very satisfied with all three aspects in "Social relationship" domain, relationship with loved ones, sex life and support from friends.

In the area "Environment" the respondents are satisfied with the housing conditions. Respondents were least satisfied with the financial situation and opportunities for recreation. Most of the nurses said that they are not involved in regular exercise because they do not have time, are tired or do not have access to sports facilities. Other research recommends organizing team-building to live a healthy lifestyle (10).

When examining relations between the observed attitudes of respondents it can be concluded that there is a significant correlation between satisfaction with

environment and mental health and that there is also a correlation between satisfaction with mental health and social relationships.

The study relied on self-assessment of the quality of life of nurses, which could lead to subjective results. Further research in this area should take into account the objective methods, such as medical records, to determine the physical health. Nursing requires accuracy, precision, warmth, responsibility and the highest professionalism and expertise, and to do all the necessary interventions to carry out further research on the impact of shift work, work in shifts at their both professional and personal life. This study is only a small contribution to that.

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## Conclusion

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According to the results of the conducted research it can be concluded:

- Quality of life of nurses is at a good level
- Most of the nurses are satisfied with their health
- Younger nurses are more satisfied with social relationships.
- Respondents are most satisfied with their own agility and meaning of their lives, while they are most dissatisfied with their financial situation and opportunities for recreation.

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## KVALITETA ŽIVOTA MEDICINSKIH SESTARA U OSIJEKU

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### Sažetak

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**Uvod.** Medicinska je sestra ta koja će biti uz pacijenta, poslušati ga, razgovarati, pružiti osjećaj sigurnosti i usmjeravati svu svoju pažnju na njega. Medicinska je sestra jedinstvena. Svjetska zdravstvena organizacija definirala je kvalitetu života kao percepciju uloge pojedinca u kontekstu kulture i vrijednosti u kojima živi te u odnosu na njegove ciljeve, očekivanja, standarde i brige.

**Cilj.** Ispitati kvalitetu života medicinskih sestara u Kliničkom bolničkom centru Osijek i Domu zdravlja Osijek.

**Nacrt studije.** Presječna studija.

**Metode.** U ispitivanje je bilo uključeno ukupno 117 medicinskih sestara/tehničara, od čega je 64 ispitanika bilo iz Kliničkog bolničkog centra (KBC) Osijek, a 53 iz primarne zdravstvene zaštite Doma zdravlja Osijek. U istraživanju se kao instrument ispitivanja primijenio anketni upitnik Anketa svjetske zdravstvene organizacije o kvaliteti života.

**Rezultati.** Medicinske sestre ocijenile su svoju kvalitetu života dobrom (45,3 %), a također su zadovoljne i svojim zdravljem (59,8 %). Ispitanici u dobnoj skupini od 22 do 32 najzadovoljniji su domenom „Socijalni odnosi” s aritmetičkom sredinom od 63,06 uz vrijednost  $p = 0,048$ . Sva tri pitanja iz domene „Socijalni odnosi” imala su visoku aritmetičku sredinu, koja je iznosila više od 3,60.

**Zaključak.** Kvaliteta života medicinskih sestara na dobroj je razini. Mlađi ispitanici imaju bolju kvalitetu života. Ispitanici su najzadovoljniji vlastitom agilnošću i značenjem svojih života, dok su najnezadovoljniji financijskom situacijom i mogućnostima za rekreaciju.

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**Ključne riječi:** kvaliteta života, smjenski rad, medicinska sestra

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